

nd
SOME
OBSERVATIONS

Concerning the

PLAGUE.

Occasion'd by, and with some Reference to, the
late Ingenious DISCOURSE of the

Learned Dr. MEAD,

CONCERNING

Pestilential Contagion,

And the METHODS to prevent it.

By a WELL-WISHER to the PUBLICK.

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A

Short Introduction

To the following

OBSERVATIONS.



THE Compiler of the ensuing brief Collections, having met with several Particulars in the most approved Authors that have wrote upon the Subject of the Plague, which he conceiv'd might afford some agreeable Entertainment to the Curious, and tend to the further Illustration of some Parts of that excellent Discourse whereunto they have a Reference, and also be of some general Advantage in case Divine Providence should for our Sins visit us with that sore Distemper; does here offer them to the View of the Publick, hoping that the many Defects will be excused and forgiven, which will be easily discerned in so inaccurate a Composure, put together in great Straits of Time, by One who pretends to little more than barely to perform the Office of an Index, in pointing at some Things which occurred to him in turning over

A Short INTRODUCTION.

Books that be thought worthy of some Notice ; and that his honest Intentions will be taken in good part by all Candid, Ingenious Readers ; and that such as have greater Abilities and Opportunities will be excited to apply their Thoughts and Studies more closely to a Subject, which seems to challenge their Attention in a more than ordinary Manner at this Time ; and will oblige the World with the Discoveries that they shall make in this Part of Nature, wherein the Lives of Men are so much concerned.



SOME



SOME
OBSERVATIONS
Concerning the
PLAGUE, &c.



AS to the *Original* of this direful Scourge of Mankind call'd the *Plague*, I find the most learned *Physicians* are much divided in their *Opinions* concerning it; and those who have searched very far into the *Secrets of Nature* do yet ingenuously acknowledge themselves to be very much at a loss about it. The great *Dr. Sydenham* freely and fully confesses his *own* and his *Brethren's* Ignorance in this Matter, and that not without a *Smart* Reflection upon such as pretend to know more than their Neighbours, in this and other Particulars of the same abstruse Nature. In *Chap. 2d. Page 71.* of his Works, he thus expresses himself. *At verò quæ, qualisque sit, illa aëris Dispositio à quâ morbificus hic apparatus promanat, nos, pariter ac complura alia circa quæ*

vecors

vecors ac arrogans Philosophantium turba nugatur, planè ignoramus. Words so severe and so discouraging to any Enquiries of this Kind, that I shall chuse to leave them as I find them.

I must here indeed freely own, that I am much pleased with the *Piety* and *Ingenuity* of the learned and diligent *Diemerbroeck*, who after a large Recital and Examination of the several *Hypotheses* that had been advanced before his Time concerning the Origin of the *Plague*, and after weighing the Arguments and Reasons brought by their respective Patrons for the Support of them, declares himself wholly dissatisfied with them all, in the 8th Chapter of his first Book, and the Annotations thereon; and after all, he has recourse to the *τὸ θεῖον* of the great *Hippocrates*, (the *Father* and *Prince* of *Physicians*) and endeavours to make it appear, that something supernatural or preternatural is to be understood thereby; and that *That* ancient *Sage* (tho' guided only by the Light of natural Reason) intended to signify by that Term, somewhat sent down from angry *Heaven*, as a just Punishment for the Wickedness of Men.

But it may not be improper to add something under this *Head* from that great *Christian Philosopher*, and (while he lived) illustrious Ornament of the *Royal Society*, Mr. *Boyle*, never to be mentioned without a Preface of Honour. This *Curious* and *Critical*, but *Sober* and *Modest* Enquirer into the Powers of *Nature*, and Operations of *Second Causes*, in his Occasional Disquisition concerning the *Original* of the *Plague*, wisely chuses the middle Way, between those who recur wholly to supernatural *Causes*, and those who impute all to natural *Ones*, in their Accounts hereof: He observes, in

in his *Experimental Discourse* concerning the *Insalubrity* and *Salubrity* of the *Air*, Page 50. &c. That the *Sacred Writings* expressly teach that some *Plagues* have been in an extraordinary Manner inflicted by *God*, particularly *That* which in *David's* Time swept away in three Days *Seventy Thousand* Men. But *He* seems to think that it is carrying the Matter too far, to infer from hence, or to affirm positively that *All* are so. *I have sometimes suspected* (says he, Page 52.) *that in the Controversy concerning the Origin of the Plague, whether it be Natural or Supernatural, neither of the contending Parties is altogether in the Right; since 'tis very possible that some Pestilences may not break forth without an extraordinary Interposition of Almighty God, provoked by the Sins of Men; and yet other Plagues may be produced by a tragical Concourse of merely natural Causes.* But we are not to think that by this last Expression *He* meant to exclude the Superior Agency or Superintendency of the *First* in any Case; for no *Man* can express a more becoming and awful Sense of, or an higher Reverence for the *Cause of Causes*, than *this* great *Genius* does in all his Writings; and I could heartily wish that *He* were more generally imitated herein by the *Virtuosi* of the present *Age*, and that a more explicit Reference to *Divine Providence* were to be found in all their Researches into *Nature*: And I cannot but hope that it would very much contribute hereunto, if our Modern *Wits* would seriously read and consider that excellent *Treatise* called the *Christian Virtuoso*, written by this *Noble Author*. But to return from this (I hope not un-
useful) *Digression*: As to Mr. *Boyle's* Opinion concerning the Rise of *Ordinary Plagues*, it is in
short

shore *This*: *He* inclines to think that the *Malignant Disposition* of the *Air* whereby the *Plague* is propagated, if not first produced, is imputable to some Kind of *Subterranean Expirations*, and particularly to *Arsenical Fumes*; but as to this *He* is far from being Positive, or Dogmatical: What *He* offers to render this Conjecture probable, they that please may see, in his *Discourse* of the *Air*, as to its Unhealthfulness or Healthfulness, already mentioned. Thus far as to the *Origin* of the *Plague*.

What the Learned Dr. *Mead* advances, about the Beginning of *Page* 4. of his *Discourse*, in these Words; [*Nor do I think that in this Island particularly, there is any one Instance of a Pestilential Disease among us of great Consequence, which we did not receive from other Infected Places*;] is perfectly agreeable to the Opinion of the celebrated *Sydenham*, who observes, that to the evil Disposition of the *Air*, which proceeds (according to *Him*) from a latent unknown Cause, there must be joyned the Reception of some *Μίασμα* or *Infection* flowing from some *Plaguy Body*, and received either immediately by a near Approximation to it, or else mediately by the Means of some *Fomes* transmitted thencefrom into something apt to receive and retain the same, and transferred therewith to distant Places; until by the great Number of infected Bodies, the *Air* receives such a *Taint*, [or rather is so charged and loaded with *Poisonous Particles*] as suffices to propagate the *Contagion* to some Distance, without any other Spark to kindle the spreading Fire. The Substance of this may be seen in *Page* 72. of his Works.

In *Page* 7. the *Doctor* briefly mentions that most terrible *Plague* which carried *Death* over the greatest Part of the then known *World*, about the
Middle

Middle of the fourteenth Century, the History of which being very remarkable (especially if all the Circumstances related by *Authors* of considerable Note be true) I shall present the Reader with a somewhat larger *Narrative* of it, as very proper to affect us with a pious Awe and Fear of the Wrath and Vengeance of a righteous *God*, and also to give us a melancholy and humbling Representation of the horrid *Degeneracy* of human Nature, and the desperate obstinacy of irreclaimably *Wicked Men*. Mr. *Boyle* in Page 69. of the forementioned Discourse has given a brief Account of this prodigious *Pestilence*, from that excellent *French* Historian *Monsieur de Mezeray*, who (as he tells us) relates in the Life of *Philip de Valois*, that the *Plague* which happened in *France* in the Year 1346, was so Contagious and Destructive, that scarce a Village or even a House escaped uninfected by it: He adds, that this *Pestilence* began two Years before in the Kingdom of *Cathay*, by a Vapour that was most horribly stinking, which brake out of the Earth like a Kind of *Subterranean Fire*; and devoured above 200 Leagues of that Country, even to the very Trees and Stones, and infected the *Air* in a wonderful Manner: From *Cathay* (says he) it passed into *Asia* and *Greece*, thence into *Africa*, afterwards into *Europe*, which it ransack'd throughout. Thus far Mr. *Boyle* from *Mezeray*; in whose Account the Date of the Year seems to have been mistaken, or 1346 misprinted for 1348, or 1349. For by Dr. *Mead's* and the following Account, it began in *Cathay*, (the Northern Part of *China*) in 1346.

Besides what I have quoted from Mr. *Boyle*, I shall entertain the Reader with a more Circumstantial Relation of this most fearful Calamity, which I

met in *Kircher's Chronology* of the most remarkable *Plagues* that are recorded in *History*, annexed to his *Scrutinium Physico-Medicum contagiosæ Lævis quæ Pests dicitur*. The *Substance* of what he writes is this ; That in the *Pontificate* of *Clement* the sixth, *Charles* the fourth being *Emperor*, there raged a most cruel *Pestilence*, the worst that ever was, scarcely the third Part of Mortals being left alive. It so prevailed every where, that *God* seemed as if he would destroy all Mankind by a general Ruin, as of old in the universal *Deluge*. *Villanius* tells us that it had its first Rise in the *Upper Asia*, and particularly in the Kingdom of *Cathay*, in the Year 1346, from a most filthy Smell supposed to proceed from a certain *Fiery Body*, which either fell from *Heaven*, or broke out of the *Earth*, and extended its horrible and terrifying *Bulk* to so vast a *Compass*, that it consumed every thing that stood in its Way, Animals, Houses, Trees, &c. for the Space of fifteen Days Journey : And some most filthy little *Beasts* furnished with Feet and Tails, [by this Description they seem to have been a Sort of *Neuts* or *Lizards*] as also *Worms*, and a small Sort of *Snakes* in a numberless Multitude, fell at the same Time from the Air upon the Earth, the Stench and Putrefaction whereof infected the whole *Region*. A *Pestilence* hence arising, invaded the adjacent Places, and then spread it self to the remoter Cities and Provinces, so that it depopulated all *Asia*. Afterwards it penetrated into *Egypt*, *Greece*, and *Italy*. Thence it passed over into *France*, *Spain* and *England*, and at length into *Germany*, *Poland* and all the *Northern Parts*, with the Destruction of innumerable Persons. In the City of *Florence* only, *Villanius* says there perished 60000; but St. An-
thony

thony makes them 100000; and although such a dreadful *Contagion* was sent among Men by the avenging Hand of *God* for their enormous Wickedness, yet after so great a Calamity those that succeeded and came greedily into the Possession of such rich Inheritances as the deceased had left, grew worse and more wicked than ever. Many Prodigies preceded this *Plague* in *Asia*, such as horrible Clefts, or swallowing Gulfs in the Earth, exhaling a poisonous Wind or Vapour, and other Things of the like Sort. Thus far *Kircher*, Page 247.

N. B. If that Part of the Story be Fact, concerning the Worms, Snakes, &c. which are said to have fallen from the Air, it seems to me much more probable that they were hatch'd from Eggs that had been formerly laid on the Earth, or Leaves of Plants, by Animals and Insects of that Kind; the Disposition of the Air, which was filled with the Steams of that horrible *Meteor* before-mentioned, perhaps greatly contributing to their Generation or quickning in such vast Numbers.

This most fearful *Plague* is also taken Notice of by many other *Chronologers*. *Alstedius* relates that at *Lubeck* it carried off 90000. And that of the Bare-footed *Monks* in several Parts it destroyed so great a Number, that in the whole their Dead amounted to 1244434; and the same Particular is mentioned by *Hogelius* in his *Horologium Historicum*, Page 632. who tells us also, that at *Erford* there died such Multitudes, that the burying Places in the City being all fill'd with Carcases, 12000 were laid in eleven Caves under the *Mountain* called the *Red Mountain*. Page 650.

Many other destructive *Pestilences* before and after this, are mentioned by *Historians*, and se-

veral of the later Ones particularly described by Learned Physicians ; as That at *Delft* in 1557 by *Forestus* : That at *Vicenza* by *Massaria* in 1576 : That at *Nimeguen* in 1636 by *Diemerbroeck* ; and the last very terrible One at *London* in 1665 by *Hodges*, which they that please may consult.

In *Page 11.* towards the End, the *Learned Author* just mentions the Opinion of some who have thought that the *Pestilential Contagion* or *Infection* is propagated by the Means of *Insects*, whose *Eggs* may easily be conveyed from Place to Place, and produce the Disease when they come to be hatched : But he observes withal that this is a *Supposition* grounded upon no manner of *Observation*, and that there is no Need to have Recourse to it. As to this *Hypothesis* of poysonous *Insects* giving Rise to the *Plague*, it has been lately insisted on by *Mr. Bradley*, who in his *new* (and indeed very ingenious and useful) *Improvements of Planting and Gardening* Reprinted here, has published a Letter from *Mr. Robert Ball* containing several curious Observations which seem to him to render it highly probable ; and in a small Tract lately published by *Mr. Bradley*, the Title of which is, *The Plague at Marseilles considered*, he has pursued the same *Conjecture*, and transcribed the *Substance* of what is to be found in the *Book and Letter* already mentioned upon the Head of *Insects*.

This Notion seems to be much a-kin to that which was advanced by *Athanasius Kircher* (that famous *Enquirer* into Nature, sufficiently known to the learned World by his Voluminous Labours) in the former *Century* ; and he seems to have taken the Hint from the noted *Cardan* ; for in *Page 52.* of his *Scrutinium Pestis*, he tells us, that *Cardan* relates that in his
Time

Time (who flourished about the Middle of the Sixteenth *Age*) there was a most cruel *Pestilence* at *Milan*, arising (as he conjectures) from an infinite Number of little Worms. Of these *Vermiculi*, *Kircher* discourses very largely in his Treatise of the *Plague*, both before and after the now mention'd Quotation from *Cardan*; and particularly in P. 141. he speaks of the *Plague* as something which he had shewn to be *animated*, because of those *Animalcula*, which he takes to be often, if not always, the *Seminary* thereof, concerning which he thus expresses himself: *Sunt autem hi Vermiculi Pestis propagatores, tam exigui, tam tenues & subtiles, ut omnem sensus captum eludant, &c.* The Substance of what he says is this: That these little *Worms*, which he supposes to be the *Spreaders*, if not wholly the *Breeders* of the *Plague*, are so exceeding *Small*, that they are to the Sense and Sight imperceptible and undiscernible, unless it be by the Help of the most exquisite *Microscopes*, and for their Smalness may be called *Atoms*; but they increase so prodigiously, that their Numbers are beyond Compute. These *Vermiculi*, as they are generated (*ex putredine*) out of Corruption, so they are easily thrust forth by all the Pores of the Body in which they are, together with the sweaty *Vapours*, and are carried along with the slightest Motion of the Air in vast Swarms, like the Motes that may be seen playing to and fro in the Sun-Beams, when they shine into a Room that is somewhat obscure thro' a Hole. These *Insects* (he supposes) do tenaciously adhere to any thing they meet with, and insinuate themselves into the smallest Pores of Bodies; and to render all this more probable, he says, that he has oft found the *Blood* taken from Persons labouring under *Putrid Fevers*

so full of *Worms*, within an Hour or two after the Emission, as even astonished him ; from whence he persuades himself, that *Man* may (not only after his Death, but even) while alive, be plentifully stored with such vile *Animalcules*, tho' the Sense cannot discern them ; and that on this, as well as other Accounts, *Job* speaks as he does, *Chap. 17. 14.* [*I have said to Corruption, Thou art my Father ; to the Worm, Thou art my Mother and my Sister.*] He goes on to shew, that this *Verminose Brood*, which (according to his Opinion) is cast forth in very great Quantity both from the *Living Bodies* of such as are infected with the *Plague*, and from the *Carcases* of the *Dead* when they begin to putrify, being received into the innermost Parts of *Linnen* and *Woolen Cloaths*, and the like, are there cherished, and therewith conveyed to distant Places ; and that this is the first and principal *Seminary* of the whole *Contagion*, as he endeavours to shew more at large. But such as desire further Information as to this Particular, must have recourse to the Book it self ; for it would require much more Time and Room than can be allowed at present, but to make an Abridgment of his copious Discourse about it in several Parts of the said Treatise. This *Hypothesis* must be acknowledged very plausible and ingenious, if it be built upon a solid Foundation ; and if such *Vermiculi* as these have a real Existence in *Rerum Naturâ*, and be not the Creatures of a strong Imagination only. That there are *Worms* very often found in *Human Bodies*, is indeed sufficiently evident, and what none are ignorant of ; and that *Worms* have been sometimes vomited up by Persons sick of the *Plague*, is attested by Authors of good Credit. *Diemerbroeck* mentions one Instance of this Kind, *Hist. 52. Page 306.* where he relates this

this Particular concerning a *Patient* of his, that he cast up by Vomit above 60 small *Worms* as red as Blood, soon after which he died: But he adds, that he never saw the like in any other Person. We are also told, that Multitudes of such *Worms* were found in some dead Bodies that were opened at *Marseilles*, which lived and moved very briskly when put into *Wine* or *Brandy*, but were soon killed with Oil and Juice of *Lemons*; yet after all, *Kircher's Vermiculi*, and Mr. *Ball's* and Mr. *Bradley's Insects*, do not seem to be of the same Species with these *Worms*; for the former are represented as so many animated *Atoms*, scarcely discoverable by the Help of the best Glasses; whereas the latter were sufficiently obvious both to the Sight and Touch. For my part, I shall not go about to determine any thing in this Matter, but shall leave it to the nicer Examination of the most Learned *Philosophers* and *Physicians*, who are capable of penetrating much farther into the Mysteries of *Nature* than I can pretend to be. Only I cannot forbear adding, that I do very much doubt while these *Insects* (which, by the way, cannot be the same with Mr. *Bradley's Blighting Insects*, for then we should have a *Plague* every time we have a *Blight*, which in and about this Place is almost as oft as we have a Spring, as the *Gardeners* know to their Sorrow, by the so frequent Destruction of their Fruit: I say, I do much doubt, while these *Insects*) remain in such an invisible State, the *Hypothesis* that is founded upon them will also remain precarious, and as little demonstrable as others that have been formerly proposed. To which I shall subjoin this one Remark more, That the Generation of *Worms*, or any other *Animals*, *ex putredine*, which *Kircher* seems to take for granted, is now almost

univer-

universally exploded, and no such thing as *Spon-*
taneous or *Æquivocal* Generation allowed to the
 meanest *Insect*: But 'tis agreed among the Learned,
 that the smallest Creatures do (as well as the great-
 est) proceed *ex Semine*, and have *Parents* of their
 own Kind by whom they are propagated. And this
 indeed is what Mr. *Bradley* no where denies; and I
 do not say but that his *Hypothesis* may be consistent
 with the *univocal* as well as *equivocal* Generation of
 such *Animalcula*. Yet give me Leave to observe
 once more, that the gradual Progress which the *Pesti-*
lence usually makes, does not seem very well to agree
 with the exceeding Lightness of these volatile *In-*
sects; and upon considering this Circumstance one
 would be inclined to imagine, that whatever is the
Fomes of the *Contagion*, it must be something more
ponderous, tho' no less *poisonous*, than these *vene-*
mous Insects are supposed to be. And I cannot well
 conceive how it would be possible by all the Care
 or Precaution in the World, to prevent the spread-
 ing of the Distemper from one End of a Country to
 the other, in a very short Space of Time, if it be car-
 ried about by these *Nimble, Light-beel'd, Living A-*
toms, who would make nothing of flying over *Lines*
 and *Rivers*, or fastning upon the Men themselves
 that stand to guard the *Passes*, and in short, must
 go which Way soever they are carried by every
Puff of Wind or *Stream* of Air. But I shall not in-
 sist further at present upon this or any other Diffi-
 culties that occur to my Thoughts with Reference
 to this *Hypothesis*. I shall leave these little *Crea-*
tures to shift for themselves as well as they can; but
 if they be such *Plaguy* ones as they are represented,
 I desire to have no experimental Acquaintance with
 them; tho' I own that the Notion and Speculation
 of

of them may be agreeable enough to an inquisitive *Genius*; and the Objections which lie cross in my Mind against this *Hypothesis* of *Plague-producing Insects*, may possibly be answered to Satisfaction by the Patrons of it, how insoluble soever they may at present appear to me.

What the Learned *Doctor* suggests in Page 22, 23, &c. against the old but unhappy Custom of shutting up Infected Houses, is so Human and Charitable, and supported with such Solid Reasons, that I cannot but hope it will be so far attended to by our wise *Legislators* in all future Regulations they shall see fit to make, that such a cruel and hurtful Method may be effectually prevented; and that if at any time it should please *God* to visit us with that sore *Distemper*, the Terror and Danger of it shall not be augmented by treating the miserable *Sufferers* with such unreasonable Rigor as manifestly tends to sink and overwhelm their Spirits, (which ought to be kept up as much as possible, as in other Diseases, so more especially in this) and to dispose them for nothing (humanly speaking) but to despair and die. And I cannot doubt but that such timely Provision will be made by the *Publick*, of convenient *Lazarettoes* for the Reception of the Sick upon the first breaking forth of the dire Disease in any large City or Town, as may (through the Blessing of Heaven) prove an happy Means of stopping the Progress thereof in its Beginning.

As to the *Alternative* which the *Doctor* proposes in the Close of his excellent Performance concerning infected Goods, that if they be not burned they may be buried deep in the Ground; I cannot but think the latter of these Methods, (or the sink-

ing them in the Sea, or in in some deep Water, where it can be conveniently done, to prevent digging up) to be much the more *eligible*; and the safest as well as least offensive manner of destroying them; for I have a vehement Suspicion, that by the *burning* of Infected Cloaths, and the like, the *venomous Effluvia*, or *poisonous Particles* adhering to them, may be carried along with the *Smoke*, and the fatal *Μάστιχα*, or *Fomes*, being *volatized* by the *Fire*, may fill all the circumambient *Air*, and instead of restraining may greatly propagate the *Contagion*. This I very well remember, that in some Parts of *England* it is a generally received *Opinion*, that the *burning* of Cloaths taken from a Person that dies of a very malignant *Small Pox* greatly tends to spread the *Distemper*; and wicked *Nurses*, who desire to make work for themselves, are said to practise this very Method to accomplish their *barbarous* Designs. And when I lived in the *County* of *Suffolk*, I was informed, that when that *Disease* was in the Town of *Ipswich*, (about 25 or 30 Years ago) a certain barbarous *Nurse* did early in a Morning, (that she might not be known) at the Head of one of the principal Streets, put fire to an Heap of *old Rags* and *Bed-cloaths*, that had belonged to some poor People who died of that *Distemper*; and the *Smoak* driving along the Street, several that passed by betimes complained of a very offensive Smell; and the next News was, that almost all that had not formerly gone thro' that *Disease* in that whole Street were seized with it in a very few Days. And if this Method of *burning* be so pernicious in the Case of the *Small Pox*, I doubt there is too much Ground of Fear (according to the common way of arguing *à minori ad majus*) that it may prove still more fatal in the

Case

of the *Plague*: But this I humbly submit to the Consideration of the Learned in Philosophy and Physick.

As for proper *Prophylacticks* or *Preservatives* from the *Plague*, the *Doctor* has not offer'd much upon this Head, and seems to despair of the Discovery of any Specifick of Virtue sufficient to fortify Nature against the Assaults of such a *malignant Disease*. After the Mention of some general and very useful Rules to be observ'd by way of Prevention, and just hinting at a few Particulars, especially the Use of *Wine Vinegar* in small Quantities, [which, with his *Conserva me Domine*, is said to have been the *Antidote* of the famous *Sylvius*] he does in the 35th Page, recommend leaving the infected Place as the *surest Preservative*, which is the same with the Counsel that *Ramazzeni* gives in his late Dissertation concerning the *Plague* at *Vienna*, about Seven Years ago, Page 469 of his Works; where he thus expresses himself: *Ut quod sentio proferam, illud unicum perplacet, quod vulgò de tribus compositum appellatur, i. e. de celeri fugâ à loco infecto, de profectione ad longinquas regiones, ac tardâ reversione; quo remedii genere sapientiores quoque Medici uti consuevere.* The Sum of which is, That, to speak his *Mind* freely, he thinks the Method of Prevention prescribed by the old *Adage*, *Mox, longè, tardè, cede, recede, redi*, to be the best, i. e. to get away soon, to go away far, and to return back slowly; which he says is a Remedy that the wisest *Physicians* themselves are wont to make use of upon this Occasion. But how proper Advice soever this may be to those who are in such Circumstances, as render them capable of following it; yet there are, alas, great Numbers to whom this will seem an *hard Saying*, as being by them impracticable. The lower Sort of People, poor *Me-*

chanicks and *Tradesmen* that have nothing to live upon, but the Profit of their mean Employments, must be forced to *stick* by the *Stuff*; they have no *Country Seats* to repair to, and few of them have any such Friend as will be free to receive them into their Houses in the adjacent Villages. If therefore any thing could be found out that would, if not always, (which indeed is not to be expected) yet pretty often prove a *Defensative* against this dreadful *Enemy*, it would certainly be a great and most acceptable Service to Mankind to acquaint the World therewith. But as to this, I (being no *Physician* my self) have little to offer, but what has occasionally occurred to me in perusing some of the best *Medical Books*, written by *Authors* of the greatest Name and Note, who have themselves been eminent *Practitioners*, and particularly have had Courage enough to visit the Sick in Places where the *Plague* has raged with the greatest Violence. Among these, *Diemerbroeck* and *Hodges* are the chief in the Class of Modern Writers; the *former* being *Physician* at *Nimeguen* during the severe *Pestilence* that made such fearful Havock there in the Year 1636; and the *latter* at *London* in 1665, when near an Hundred thousand Persons were cut off by this *Flagellum Dei*. As to *Diemerbroeck*, that great Judge Mr. *Boyle* says, that he prefers his Book of the *Plague* to any that he had ever read of that *Disease*, P. 81. of his Treatise of the Air, already mentioned; and indeed *he* seems to have communicated his Observations to the World with a great deal of ingenuous Plainness and Fidelity. It would take up too much room to transcribe the half of those Receipts, which he proposes from himself and others by way of Prevention, in his Treatise of this Distemper;

per ; I shall therefore only give my Reader the Substance of what he sets down in the 12 Ch. of his 2d. Book, the Title of which is *De meo ipsius Vivendi modo*, where he faithfully relates what Course he himself took for his own Preservation, while he attended the Sick during that sad time in which the *Plague* raged at *Nimeguen*. The Sum of what he says, I have endeavoured to contract as follows: He tells us, that he avoided as much as he could all vehement Perturbations of Mind : That he lived intrepidly, or without Fear : That it was the same Thing to him whether he visited the Sick of the *Plague* or of any other Distemper, and that he as readily served the Poor *gratis*, as the Rich for a *Reward* ; He adds, that if at any time he found himself somewhat shocked, (which in that doleful Season, wherein there was scarce an House in the whole City that escaped the *Contagion*, must needs happen now and then) in such a Case he refreshed his Spirits with three or four Draughts of *Wine* ; That being frequently disturbed in the *Night*, and much tired in the *Day* with walking up and down from *Patient* to *Patient*, he was forced to Sleep an Hour after Dinner, when he could best spare the time, though he dissuaded others, who were under no such necessity, from sleeping in the *Day* : That as to Diet, he used *Meats* of the most easy Digestion, avoiding *Swine's Flesh*, *Herrings*, and the like, which he had found hurtful to him : That his *Drink* was ordinary *Ale* and Small *White Wine*, of which he sometimes drank to Chearfulness, but never to Excess ; That he kept his Body open, but not too loose, only so as to have *One* or *Two* Stools in a *Day* : That *Once* or *Twice* in a week at Bed-time he swallowed *One* or *Two* of his Anti-pestilential Pills described in

Chap.

Chap. 9. [the Composition of which shall be subjoined to this Account] That beginning to visit the Sick between *Four* and *Five* in the Morning, he could then take Nothing, his Stomach perfectly loathing both Meat, Drink, and Medicine, so that he was constrained (though against his own Judgment) to go forth fasting, and could do no more than (after committing himself to God by pious Prayers) to chew some Grains of the lesser *Cardamon*; That about *Six* a Clock in the Morning he took a little *Treacle* or *Diascordium*, or eat a little *Candy'd Orange Pill*, and very frequently three or four Bits of *Candy'd Elecampane*: About *Eight* he breakfasted upon a Piece of *Bread* with *Butter* and *Green-cheese* made of Sheeps Milk, drinking a Glass of *Ale*, and now and then (but not daily) he took a Draught of *Wormwood Wine* about *Nine*: At *Ten* he smoaked a Pipe of *Tobacco*, and after Dinner *Two* or *Three*, and the like after Supper, and sometimes *Two* or *Three* more between Meals; and if at any Time he found himself affected with the *Ill Smell* of the Sick, he presently had Recourse to the same Remedy, which he says, he found by his own Experience, as well as always thought to be the most effectual *Preservative*, so that the *Tobacco* be of the best Sort. He adds, that upon the ceasing of the *Plague* he left off *Smoaking*, not willing to accustom himself to it, lest he should turn its laudable Use into a detestable Abuse.

The Composition of the *Anti-pestilential Pills* is as follows.

Take the Roots of *Butter-bur*, *Carline Thistle*, *Dittany*, *Angelica*, *Elecampane*, of each half an Ounce, of *Gentian* one Dram and Half; of the best *Rhubarb*, one Ounce and Half; of *Zedoary* one
Dram:

Dram: Of the whitest Agarick, Half an Ounce; Take also the Herbs Scordium, the lesser Centory, Rue, of each Half an Ounce: Carduus Benedictus, six Drams; and of the Flowers of Stachas one Dram and an half; as also the Seeds of Citron and Oranges, of each one Dram; of all these make a gross Powder, which steep for two or three Days in two Pounds and an half, or three Pounds of White Wine; then boil it for about a Quarter of an Hour, and strain it very strongly in a Press, and afterwards strain it again through thin Paper: In the strained Liquor dissolve three Ounces and an half of the best Aloes, and three Drams and an half of clear Myrrh in Drops: Let the Moisture evaporate in a China Dish, till a Mass of Pills can be made of the Remainder. These Pills (says the Author) we have found to be of great Use in Time of the Plague.

Thus far from the accurate Diemerbroeck; who has also given us no less than 120 Histories of so many particular Persons afflicted with the Plague, in whose Cases may be seen all the various Symptoms of that sore Distemper, with the Remedies proper to each of them, which are well worth the Perusal of such as understand the Language wherein they are writ.

Proceed we now to the Learned Dr. Hodges, who by the Appointment of the Government, continued in London during that most dreadful Pestilence, which raged there in the Year 1665, of which he afterwards published an Historical Narration with the Title of, *Λουσολογία*, or, *An Account of the Plague*; in which he treats concerning the Rise and Progress, the Causes, Signs, and Cure of the Contagion, and also relates his own Manner of living in that Time of Danger. What I shall observe from him, shall be only
the

the few particular Directions, which he gives concerning such Things as he judges proper to be done by way of *Precaution* ; omitting the general ones relating to the timely providing *Lazzaretto's*, keeping *Houses* and *Streets clean*, and the like, which Dr. Mead has perfectly well recommended. As to particular *Preservatives* from the *Plague*, Dr. Hodges gives us several *Receipts* ; of which I shall only set down *Two* that are of easy Preparation, and perhaps of equal Virtue with the more pompous Forms. The first is what he calls an *Electuary* for the Use of the Poor, the Composition of which is in Page 229 of his Book, viz. Take Conserve of Wood-Sorrel and Goat's-Rue, of each half a Pound ; of Marigolds, one Pound ; London-Treacle, three Ounces ; Bole Armoniack vitriolated, four Ounces ; with Syrup of Lemons as much as is sufficient ; make an *Electuary* ; two or three Drams of which may be taken Morning and Evening. The other is an *Haustus*, said to be of great Virtue ; viz. Take Water of red Roses camphorated, two Ounces ; the best Vinegar, one Ounce ; in which dissolve two Scruples of the best Bole Armoniack ; add three Drams of simple Syrup of Scabius ; mix them for a Draught.

I do the rather mention this, because the Use of Vinegar seems to be much approved by the Learned Dr. Mead. Diemerbroeck also highly commends Vinegar, and says, that he had seen many poor People better preserved by taking a Spoonful thereof every Morning, than some others were by the most costly Remedies, Page 170.

Among other *Antidotes* against the *Pestilential Contagion*, Dr. Hodges does particularly commend *Canary* of the best Sort, of which he frequently drank while he attended the Sick, and found it of singular

gular Use to himself and others. His time of drinking it was at *Dinner*, and a little before *Bed-time*; but as to the *Smoaking* of *Tobacco*, which *Diemerbroeck* so much extols, he speaks very doubtfully of it, and seems to have had an Aversion to it, and to suspect that the *pestiferous Vapours* may be sucked in with the *Smoke*: And in fine, he prefers his good *Spanish Wine* very much before it; and this, so far as appears, was the *Antidote* he chiefly trusted to among the *Internal* ones. But then, as to *External* Defensatives against this deadly Enemy (rejecting the many *Amulets* vulgarly prescribed, the most of which he thinks to be useless, and some noxious) there is one which he greatly commends, as the most powerful and effectual of all others in this Case, and that is the having of large *Issues*; for Instance, one in the *Left Arm*, and the other in the *Right Leg*, capacious enough to contain five or six Pease. The more to enforce this Advice, he does solemnly affirm, *Page 240.* that as oft as he went into Places that were more than ordinarily infected, he found that Part of his *Arm* in which the *Issue* was, exceedingly pained, and that *thin, undigested, bloody Matter* would flow from it with a very smart Pungency; and that upon this Warning given him, he presently had recourse to proper *Alexipharmicks*. It seems plain from hence, even to Sense and ocular Demonstration, that the *Virus*, the *Venom* and *Poison* of the *Contagion* did work off in a great measure by means of this Sort of *Evacuation*. I shall only add under this *Head*, that *Diemerbroeck* does also much commend this Remedy; and observes, that many who had *Issues* escaped the *Plague* at *Nimwegen*; and of those that had it, a considerable Number recovered speedily upon taking a *Sweating*

D. Medicine;

Medicine; and he mentions several other eminent *Physicians* that had found the happy Effect of such *Issues* in the Course of their *Practice*, Page 150, &c. He observes also, that many of those that had *Sores* about them escaped the *Plague*; and he tells us, that *Galen* of old made the same *Observation*.

I shall now, in the Close of this *Collection*, just mention One or Two *Preservatives* recorded by the Excellent Mr. Boyle, towards the latter End of his Discourse of the *Air* before-mentioned. The former of these is in Page 86. which was communicated to him by one whom he calls an ancient and very experienced *Physician*, to whose Care a great *Pest-house* was committed. This Person own'd to Mr. Boyle, that besides ardent *Prayers* to God, and a very regular Diet, his constant *Antidote* was only to take every Morning fasting, a little *Sea-Salt* dissolved in a few Spoonfuls of fair *Water*. Mr. Boyle adds, that he thinks it desirable that Notice be taken of all Remedies that have been found by good *Trials* available against the *Plague*; for since *Pestilences* are various in their Kinds, 'tis very possible that their appropriated Remedies may be so too; and that Medicine may prove successful in one, which has proved ineffectual in another. The Noble Author adds to this, That the said Consideration forbade him to pass by the following Particular, viz. That a very Learned *Physician* having recommended to him the Herb called *Galega*, or *Goat's-Rue*, at that time little noted in *England*, as a most effectual *Antidote* against the *Plague*, he caused it to be cultivated in a Garden; and when the *Pestilence* raged most, having some of it by him made up with a little *Sugar* in the Form of a fine green *Conserve*, he

sent it to *Two* infected Persons, who, by the Divine Blessing on it, both of them recovered. He also takes notice of the great Virtue of this *Herb* against the *Bitings* of *venomous Creatures*. It may be eaten in its entire Substance as a Sallad, or the *Conserve* or *Syrup* may be taken, or the *Juice* newly express'd, which he thinks better than the *Syrup* or *Conserve*.

Thus I have finished what I had to offer to the *Publick* concerning the *Plague*, and the most proper *Antidotes* against it, which I have met with in my little Reading. I shall only add, That after all, our principal Trust and Confidence must be in the *Goodness* and *Mercy* of *Almighty God*, thro' the Merits of our *Lord* and *Saviour Jesus Christ*; and it greatly concerns all *Persons* to search and try their Ways, and turn unto the *Lord* with their whole Hearts. Let the *Means* and *Instruments*, or *Second Causes* of this terrible Calamity be what they will; whether it owes its *Origin* to *Subterranean Steams*, and the *Expirations* of noxious *Minerals*, (as Mr. Boyle conjectures) or to a pestiferous *Aura*, proceeding from a peculiar, and (in a sort) corruptive Alteration of the *Nitro-aerial Spirit*, (as Dr. Hodges thinks;) or to prodigious *Swarms* of invisible *venomous Insects*, (as Kircher and Mr. Bradley imagine;) or, *lastly*, to an unhealthy Constitution of the Season, and Disorder in the *Air*, occasioned by excessive *Heat* and *Moisture*, (as Galen taught of old) which evil Constitution is heightened and rendered more malignant by the Stinks of *stagnating Waters*, by *putrid Exhalations* from the *Earth*, and from dead *Carcases* lying unburied, which fill the *Air* with *contagious Particles*, and so being suck'd in with the *Breath* taint in their Passage the *salival Juices*, which being swallowed down into

the *Stomach* fix the *Malignity* there, as the Learned Dr. *Mead* observes, Pag. 7, and 11. of his Discourse: I say, whether this *dreadful Disease* owes its *Origin* to any one, or (which is more probable) to a *Concurrence*, and *Complication* of *Secondary Causes* ; yet still it becomes us to look higher, and to reverence *Divine Providence* as the *First* and *Principal Cause*. The great God has said, *Amos* 3. 6. [*Shall there be Evil in a City, and the Lord hath not done it ?*] *Sword*, and *Famine*, and *Pestilence* are what he expressly calls, *His sore Judgments*. (*Ezek.* 14. 21.) The *Earth*, the *Water*, the *Fire*, the *Air*, all the *Elements*, and all their *Actions* are at his *Beck*, and under his steady *Government* ; and 'tis not improbable that he does employ *Angels*, as the *Ministers* of his *Justice*, to inflict deserved *Punishments*, and particularly this of *Pestilence* upon a guilty People : Possibly he may by their *invisible Hands* scatter through the *Air* those fatal *Miasmata*, those malignant *venomous Atoms*, and *poisonous Effluvia*, the *Seeds* of *contagious Distempers*, that carry *Death* and *Destruction* all around : To which Thought some *Divines* have been led by some Passages in *Holy Writ*, that seem in their Opinion to look this way. Be this as it will, 'tis certain that the *Almighty* is the principal *Agent*, who orders and over-rules all *inferior ones* ; and therefore whatever, or whoever be the *Instruments*, 'tis with him that we have chiefly to do ; 'tis from him that we have more to *fear* or *hope*, than from all the *World* besides ; and therefore it must needs be both our *Duty* and our *Interest* to fly to his *Mercy-Seat*, to *humble* our selves before him, and to make our earnest *Supplication* to him, either to *preserve* us from such *publick* desolating *Calamities*,
or

or to *prepare* us for them. And a general *Humiliation*, *Repentance*, and *Reformation* is one of the most hopeful Means of *Preservation* from this terrible *Distemper*, whereby the *Wrath* of an *offended God* is revealed from *Heaven* against the *Unrighteousness* and *Ungodliness* of a guilty World. Yea, if *God* should see fit to send it among us, such *Repentance* and *Amendment*, joined with a true *Faith* in the *Mediator*, would best prepare us for it, give us the greatest *Courage* and *Comfort* under it, and the most happy *Issue* out of it, and even *Death* it self would be to us no other than a *Passage* to a better *Life*.

For the *Direction* of the curious *Reader* that desires to consult the *Authors* themselves which I have used in this *Collection*, I here subjoin a *Catalogue* of them with the *Editions* made use of by me.

Alexandri Massariæ Vicentini Practica Medica. Venetiis. 1622. Fol. Editio quarta.

Petri Foresti Alemariani Opera omnia. Rothomagi. 1653. Fol.

Athanasii Kircheri Scrutinium Physico-Medicum Contagiosæ Luis, quæ Pestis dicitur. Romæ, 1658. Quarto.

Isbrandi de Diemerbroeck Tractatus de Peste Noviomagenfi. Amstelædami. 1665. Quarto.

Bernardini Ramazzini Opera. Londini. 1717. Quarto.

Alstedii Thesaurus Chronologiæ. Herbornæ Nassoviorum. 1637. Editio Tertia. Octavo.

Λοιμωγία sive Pestis apud Populum Londinensem grassantis Narratio historica. Authore Nathanaele Hodges. Londini. 1672. Octavo.

An Experimental Discourse of some unheeded Causes of the Insalubrity and Salubrity of the Air

By

By the Honourable R. Boyle. London. 1685. Octavo.

Zachariæ Hogelii Horologium Historicum. Lipsiæ. 1704. Editio secunda. Octavo.

Thomæ Sydenham Opera. Lond. 1705. Editio tertia. Octavo.

Such as desire to see more of the Nature and Cure of the *Plague*, may consult *Burnet's Thesaurus Medicinæ Practicæ à Daniele Puerario Auctus in duobus Tomis*. Geneva. 1678. Octavo. In which he has collected the principal Remedies made Use of against this Distemper by the most eminent Physicians of the two last Ages, such as *Forestus*, *Fabritius*, *Hildanus*, *Rodericus à Fonseca*, *Felix Plateanus*, *Joannes Crato*, *Gregorius Horstius*, *Raymundus*, *Mindererus*, *Helmontius*, *Mercurialis*, *Kircher*, *Diemerbroeck*, *Hodges*, and others. Or they may have Recourse to *Etmullerus*, and the Collections of the Voluminous *Manget*, in his *Bibliotheca Medico-Practica* in four large Folio's. His Collections relating to the *Plague* may be found in the *Fourth* Volume, printed at *Geneva*, 1698. who to the Authors already mentioned has added some later ones, as *Barbette*, *Sylvius*, *Willis*, &c.

Add to the Preservatives, that *Garden Rue* eaten with Bread and Butter, or made up into a *Conserve*, is much commended against the *Plague*; and if this were added to the *Conserve* prescribed in *Page 23*. I should think it would be to the Advantage thereof. The very Smell of this *Herb*, tho' ungrateful, is said to be an *Antidote*.

Candy'd Elecampane Roots are also much praised by *Diemerbroeck*.

To what is observed in the *Fourth* Page from Dr. *Mead* and *Sydenham* concerning the *Plague's* not springing

springing up of its self in this Part of the World, I shall beg Leave to add as a Close to this *Paper*; That altho' it may be true that this *Distemper* never breaks out in these *Countries* unless the *Seminary* of it be brought to them from some infected Place, yet the Disposition of the *Air* may sometimes be such as to render it more apt than ordinary to receive into it the *Poisonous Fomes*, and to propagate the same; which is what these Learned *Gentlemen* do expressly acknowledge. The Use which I would make of this *Reflection* is, that the *warm Constitution* of the *Air* which has prevailed for the greatest Part of the present *Winter*, and is generally thought to be too favourable to the *Seeds* of this *Disease* (whatever they are) should put us upon *doubling our Diligence*, in the Use of all proper Means to guard against the Admission of any thing from Abroad, that may give the least Suspicion of its harbouring such a *fatal Mischief*: For should any thing of this Kind be conveyed to us, it may have the like unhappy Effects with a *Little Spark* falling into a great deal of *dry Tinder*, that may quickly diffuse it self, and break forth into a *Flame*, not easy to be extinguished.

In Magnis voluisse sat est.]

F I N I S.

